

ABSTRACT

A rotational angle of a motor operative to propel forward a screw in an injection molding machine is detected at an encoder. An output from the encoder is employed to obtain an angular velocity ω of the motor. From the obtained angular velocity ω , an estimated melt pressure value $\hat{\delta}$ that contains no differential term is derived using a certain observer theory. The estimated melt pressure value $\hat{\delta}$ is employed to calculate a torque command value T^{CMD} for the motor, which is fed back to the motor. Thus, precise propelling power control unaffected by noises can be executed without the use of a pressure sensor such as a load cell.